

Aloe Fibre.

Under this term may be included the fibres obtained from a large number of plants most of which are of the same genus, and others of allied genera. Aloe, Yucca and Sisal hemp are some of the names by which these fibres are known in commerce. Though they are obtained from various species, they possess more or less similar characteristics. Among aloe-fibre-producing plants, the following are some of the best known:—

Agave americana (blue aloe), *Agave angustifolia* (aloe with small leaves), *Agave rigida*, *Agave Morrissi* and *Agave vivipara*. (Sisal hemp); *Furcraea gigantea* (Mauritius hemp) *Furcraea cubensis* (Silk grass).

The Agave is originally an American plant, but at the present day it is found naturalized in many parts of the world. In South Africa the different varieties of the plants have found a congenial home, and also in Mauritius. They are also found growing equally well in South Spain and India. The *Agave americana* (blue aloe) is the most common species found in all the above-named countries. The species has a long sword-like leaf, with parallel veins, eight to ten feet in length. The leaf terminates in a strong thorn. On account of this thorn the aloe has become a favourite one as a hedge plant, as it effectually checks the inroads of animals. In Sicily, Italy, and some parts of India many a plantation is guarded by an aloe fence. When the young suckers, which are both given off from the stem of the mother plant and produced on the long flower stalk, are put in the ground, they put forth a quick growth and become full-sized plants within three to four years of their planting. But the aloe does not flower so soon as it matures. It takes from eight to twenty years before producing the inflorescence which has a long pole-like stalk twelve to eighteen feet in length shooting out vertically from the plant, and this long flower stalk bears an immense number of branches, all of which produce flowers and at last young suckers. The fibre is found in the leaves of this plant and is very long and tough. The juice of the leaves is slightly acrid, but has a soapy character, and is sometimes used as a substitute for that substance in washing cloth, &c. The fibre obtained from this Agave has been long in use in Mexico in the manufacture of ropes and cordage, whilst in the West Indies, ropes, fishing nets and hammocks are made from it. *Agave angustifolia* is largely found in Mauritius and South Africa and resembles the *americana* in its habits and characters. *Agave rigida* and *Agave Morrissi* are almost allied to one another; the former is found abundantly in Yucatan, where its fibre is the chief article of commerce, whilst the latter variety is found in Jamaica and many of the West India Islands. The leaves of this plant are of a greyish green colour with sharp thorns set on the edges. It does not differ

much from the blue aloe in its habits and other characters. *Agave vivipara* is also known as the bastard aloe, the leaves are green but smaller in size when compared to the other aloes, being not more than three to four feet in length. It is found growing in South America where the natives hold its fibres in great esteem. Waterton, the well-known traveller of South America, says that it is of incalculable value to the natives, who always have a supply on hand. The strength of the fibre is really wonderful, and though so fine that it seems that it would snap at a touch, it is more like steel wire than a vegetable production. This plant also grows well in the north of Africa.

Furcraea gigantea and *Furcraea cubensis*—The genus *Furcraea* was not first included in the agave under the species *foetida*, but was subsequently separately classified as a distinct one. It is known as green aloe in Mauritius and was introduced from America, the home of the aloes. The stalk of this plant is sometimes very short and sometimes long. The leaves are numerous and erect, and are about eight feet in length and six to seven inches broad. There is a fair demand for aloe fibre in the European market, and it has been sold in London during the last few years at prices ranging from £30 to £40 per ton. The prices vary very much according to the qualities. Among the aloes, the "Sisal" stands the highest as regards quality and value, for a ton of Sisal fibre has brought on an average £53. The cultivation of the aloe is largely carried on in Yucatan and Mauritius, and the plant is gradually coming to the front as a commercial product in other tropical countries also. The Government of Jamaica is encouraging the establishment of aloe plantations, and in Ceylon some planters have joined together with a view to trying it on a large scale, and have applied for five thousand acres of Crown forest land for the purpose, which they are to be put in possession of without much delay. The formation of an aloe plantation is not attended with much difficulty. Any dry poor land will suit it, but rocky, gravelly soil is considered to be the best for the production of the finest fibres. In moist and rich lands the plants grow so vigorously that the fibre becomes poor in quality and smaller in proportion. It is also noteworthy that shade in any form is always prejudicial to the plant in all stages of its growth. It is always advisable to select vigorous specimens for the purpose of planting, and the young plants which grow around the stem are preferable for the purpose, to those which are produced in the flower stalks. The rainy season should be taken advantage of for planting purposes, not that a plantation would fail by planting in dry weather, but the plants would commence their growth well and begin to yield earlier. The number of plants which should be put down per acre differs greatly according to the practices of the planters. While the Mauritius planters consider 1,200 per acre a fair number, in Yucatan they put down only 600. In three to four years the

plants begin to yield. The leaves are then cut close to the stems, and are made into bundles and sent for the extraction of the fibres. There are various methods in use for the extraction of fibre from the aloe leaves. In Yucatan it is extracted by Death's fibre machines with a wheel of 50 inches in diameter, 8 inch-face and 8 knives or scrapers, and driven by a 10 H. P. engine; nearly 8,000 leaves being prepared in a day. In Mauritius the natives extract the fibre by striking gentle blows on the leaf with a piece of wood. In large plantations, machines of various sorts are used, the most favourite being the "Marabal" machine. The production per acre of fibre ranges from one to two tons, and on the whole those engaged in the aloe fibre industry are obtaining very satisfactory returns.--(*Indian Agriculturist*.)
